



FM OIPE

RAW SEQUENCE LISTING

DATE: 04/11/2002

PATENT APPLICATION: US/09/986,667

TIME: 12:53:29

Input Set : A:\Sequence Listing DIV4.txt

Output Set: N:\CRF3\04112002\I986667.raw

```

3 <110> APPLICANT: HO, CHIEN
4      ISAI, CHING-HSUAN
5      FANG, TSUEI-YUN
6      SHEN, TONG-JIAN
8 <120> TITLE OF INVENTION: LOW OXYGEN AFFINITY MUTANT HEMOGLOBIN
10 <130> FILE REFERENCE: 002547/20118DIV4
12 <140> CURRENT APPLICATION NUMBER: 09/986,667
13 <141> CURRENT FILING DATE: 2001-11-09
15 <150> PRIOR APPLICATION NUMBER: 09/598,218
16 <151> PRIOR FILING DATE: 2000-06-21
18 <160> NUMBER OF SEQ ID NOS: 7
20 <170> SOFTWARE: PatentIn version 3.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 28
24 <212> TYPE: DNA
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
betaN108
29      Q mutation into plasmid pHE2
31 <400> SEQUENCE: 1
32 atctgctag gtcaggtact agtttgcg
35 <210> SEQ ID NO: 2
36 <211> LENGTH: 30
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial Sequence
40 <220> FEATURE:
41 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
alphaD94
42      A mutation into plasmid pHE2
44 <400> SEQUENCE: 2
45 ctgcctgttg ctccgggtcaa ctccaaactg
48 <210> SEQ ID NO: 3
49 <211> LENGTH: 29
50 <212> TYPE: DNA
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
betaL105
55      W mutation into plasmid pHE2
57 <400> SEQUENCE: 3
58 ggaagaacttc cgatggctcg gtaacgtac
61 <210> SEQ ID NO: 4
62 <211> LENGTH: 27

```

63 <212> TYPE: DNA

64 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

DATE: 04/11/2002

PATENT APPLICATION: US/09/986,667

TIME: 12:53:29

Input Set : A:\Sequence Listing DIV4.txt

Output Set: N:\CRF3\04112002\I986667.raw

66 <220> FEATURE.

67 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
betaN108

68 Q mutation into plasmid pHE7

70 <400> SEQUENCE: 4

71 acagaccagt acttgtecca ggaagct 27

74 <210> SEQ ID NO: 5

75 <211> LENGTH: 1140

76 <212> TYPE: DNA

77 <213> ORGANISM: Homo sapiens

79 <400> SEQUENCE: 5

80 aaatgagctg ttgacaatta atcatcggtc cgtataatgt gtggaattgt gagcggataa 60

81 caattttcaca caggaaacag aattcgagct cggtaaccgg gctacatgga gattaactca 120

82 atctagaggg tattaataat gtatcgctta aataaggagg aataacatat ggtgctgtct 180

83 cctgcgcaca agaccaacgt caaggccgcc tggggtaagg tcggcgcgca cgtggcgag 240

84 tatggtgcgg aggccttga gaggatgttc ctgtccttcc ccaccacca gacctacttc 300

85 ccgcaatttc atctgagcca cggtcttgc caggttaagg gccacggcaa gaaggtggcc 360

86 gagcggctga ccaacgcgct ggccacgtg gacgacatgc ccaacgcgct gtcggcctg 420

87 agcgccttgc acgcgcacca gcttcgggtg gaccgggtca acttcagct cctaagccac 480

88 ttcctgtgtg tgaccttgc cgcaccctc ccgcgcaggt tcaccttgc ggtgcacgc 540

89 ttcctgtgtg agttccttgc ttctgtgag accgtgtgt cctccaaata cgtttaaact 600

90 ggggttatt aataatgtat cgttaaata aggaggaata acatattgtg cactgactc 660

91 ctgagagaa gtctgcggtt actgcctgt ggggaagggt gaactgtgat gaagtttgtg 720

92 atgagggcct gggcaggctg ctggtgtgt acccttggac ccagaggttc ttgagctct 780

93 agaggtatct gtcactcct gatgtgtta tgggaacccc taaggtgaag gctcatggca 840

94 gaaagtgt cgttgccttt agtgatggc ttggtacact ggacaacctc aagggcacct 900

95 ttgcacact gattgagctg cactgtgaca agctgcacgt ggtactgag aacttcaggc 960

96 ttcctgggaa gtaactgttc tctgtgtgtg cccatcactt tggcaagaa ttacccccc 1020

97 cgtgcacgca tgcctatcag aaagtgggtg ctggtgtgtg taatgcctg gccacaagt 1080

98 atcactaagg atgcattgt ttggcggat gagagaagat ttctgcctg atacagatta 1140

119 <210> SEQ ID NO: 6

120 <211> LENGTH: 36

121 <212> TYPE: DNA

122 <213> ORGANISM: Artificial Sequence

124 <220> FEATURE.

125 <223> OTHER INFORMATION: DESCRIPTION OF ARTIFICIAL SEQUENCE: Primer to introduce
betaL105

126 W mutation into plasmid pHE7

128 <400> SEQUENCE: 6

129 cctcagaact tcaggtgctt aggcacactg ctggtc 36

132 <210> SEQ ID NO: 7

133 <211> LENGTH: 1140

134 <212> TYPE: DNA

135 <213> ORGANISM: Homo sapiens

137 <400> SEQUENCE: 7

138 aaatgagctg ttgacaatta atcatcggtc cgtataatgt gtggaattgt gagcggataa 60

139 caattttcaca caggaaacag aattcgagct cggtaaccgg gctacatgga gattaactca 120

140 atctagaggg tattaataat gtatcgctta aataaggagg aataacatat ggtgctgtct 180

141 cctgcgcaca agaccaacgt caaggccgcc tggggtaagg tcggcgcgca cgtggcgag 240

142 tatggtgcgg aggccttga gaggatgttc ctgtccttcc ccaccacca gacctacttc 300

143 ccgcaatttc atctgagcca cggtcttgc caggttaagg gccacggcaa gaaggtggcc 360

RAW SEQUENCE LISTING

DATE: 04/11/2002

PATENT APPLICATION: US/09/986,667

TIME: 12:53 29

Input Set : A:\Sequence Listing DIV4.txt

Output Set: N:\CRF3\04112002\I986667.raw

150	gacgcgcgtga	ccaacgcgcgt	ggcgcacgtg	gacgacatgc	ccaacgcgcgt	gtccgcgcctg	420
152	agcgaacgtgc	acgcgcacaaa	gcttcgggtg	gacccggtca	aattcaagct	cctaagccac	480
154	tgcctgctgg	tgacccctggc	cgcaccactc	cccgcgcagt	tcacccctgc	ggtgcacgac	540
156	tccttgagaa	agttccctggc	ttctgtgagc	accgtgctga	cctccaaata	ccgttaaact	600
158	agaggggtatt	aataatgtat	cgtttaaata	aggaggaata	acatatggtg	cacctgaact	660
160	ctgagagagaa	gtctgcgcgtt	actgcctctg	ggggcaagggt	gaacgtggat	gaagttgggtg	720
162	atgagggccct	gggcaggtctg	ctggtggtct	acccttggac	ccagaggttc	tttgagtccct	780
164	ttggggatct	gtccactccct	gatgctgtta	tgggcaaccc	taaggtgaag	gtccatggca	840
166	agaaagtgtct	cgggtgccttt	agtgatggcc	tggtccacct	ggacaacctc	aagggcacct	900
168	ttgcacacct	gagtgagctg	cactgtgaca	agctgcacgt	ggatccctgag	aacttcaggt	960
170	ggctagggaa	cgtgctggtc	tggtgctgg	cccatcactt	tggcaaaagaa	ttcaccacc	1020
172	cagtgcagggc	tgccatcag	aaagtgggtg	ctggtgtggc	taatgcctg	gcccacaagt	1080
174	atcactaaggc	atgcactctgt	tttgccggat	gagagaagat	tttcagcctg	atacagatta	1140

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/986,667

DATE: 04/11/2002

TIME: 12:53:30

Input Set : A:\Sequence Listing DIV4.txt

Output Set: N:\CRF3\04112002\I986667.raw